

Exhibit B

Page 1

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

IN RE: FCA US LLC

MONOSTABLE ELECTRONIC

GEARSHIFT LITIGATION

Case No. 16-md-02744

MDL No. 2744

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VIDEO DEPOSITION OF  
DAVID CADES, Ph.D.

January 25, 2019

9:12 a.m.

10 South Wacker Drive, Suite 2300

Chicago, Illinois

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\* \* \* \* \*

I N D E X

WITNESS EXAMINATION

DAVID CADES, Ph.D.

EXAMINATION BY MS. SOFFIN 6

EXHIBITS

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| Exhibit 93 | Report of Douglas Young,<br>Ph.D. and David Cades,<br>Ph.D. | 7 |
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| Exhibit 94 | FCA Transmission | 82 |
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Electronic Shift Lever  
Important Safety Recall  
S27/NHTSA 16V-240;  
MCPS012178

|            |                  |    |
|------------|------------------|----|
| Exhibit 95 | FCA Transmission | 82 |
|------------|------------------|----|

Electronic Shift Lever  
Important Safety Recall  
S27/NHTSA 16V-240;  
MCPS012177

|            |                       |     |
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| Exhibit 96 | Thumb Drive of Expert | 102 |
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File

(Exhibit 96 was retained by counsel for  
plaintiff.)

1 report?

2 A. Sorry.

3 Q. That's okay.

4 A. Not to my knowledge.

5 Q. Have you written any publications on  
6 consumer purchase behavior?

7 A. I do have publications that touch on  
8 aspects of consumer purchase behavior.

9 Q. Which ones?

10 A. So if you look at the publication list on  
11 page 3, the first paper, Hoyos, et al.

12 Q. I'm slow. Give me a minute.

13 Okay. What about consumer purchase  
14 behavior was addressed in this publication?

15 A. That paper looked at aspects of advanced  
16 driver technology and whether or not various  
17 consumers would be interested in purchasing it,  
18 whether they wanted those technologies and their  
19 general perceptions of the technologies.

20 Q. And Dr. Lester -- or sorry -- Hoyos, what  
21 is Hoyos's background?

22 A. Dr. Hoyos has a Ph.D. in psychology,  
23 I believe.

24 Q. And Lester?

25 A. Dr. Lester has a Ph.D. in psychology.

1 consumer behavior as it relates to purchasing  
2 products and specifically automobiles.

3 Q. Have you performed any of this research?

4 A. Not beyond what we have discussed earlier  
5 with respect to the research and publications  
6 I have looking at individual's desires with respect  
7 to purchasing vehicles with advanced vehicle  
8 technology.

9 Q. Just those two studies that you pointed to  
10 in your list?

11 A. I believe so, yes.

12 Q. Are you offering an opinion in this case  
13 on economic damages or monetary value?

14 A. The analysis that I've performed with  
15 respect to purchase decision shows that it is  
16 unlikely and that the various individuals among the  
17 named plaintiffs, as well as the broader putative  
18 class, would not be similarly affected by the  
19 inclusion of the monostable shifter, a presentation  
20 of any type of disclosure or recall notice as well  
21 as the implementation of the recall remedy.

22 Q. Does that mean you're offering an opinion  
23 on economic damages?

24 A. Not to a specific number, but to the  
25 presence and type of any specific damage, I would

1 say yes.

2 Q. Are you offering any opinions on the  
3 engineering or design of the gearshift?

4 A. Yes.

5 Q. In what capacity?

6 A. Looking at the design and implementation  
7 of the monostable shifter -- is it okay if I refer  
8 to them as the "class vehicles"?

9 Q. Yes.

10 A. The design and implementation of  
11 monostable shifter in the class vehicles from a  
12 human factors perspective.

13 Q. Have you ever designed a gearshift?

14 A. I have not.

15 Q. What kind of car do you drive?

16 A. I currently drive a Land Rover Discovery  
17 Sport.

18 Q. What kind of gearshift does that have?

19 A. An electronic rotary shifter.

20 Q. Do you like it?

21 A. I have no particular opinion on it. It  
22 allows me to shift from one gear to the next.

23 Q. Going back to the science of purchase  
24 decisions, are there subsets within the science  
25 like food? Automobiles? Vacations?

1 A. I'm sorry. Could you repeat the question?

2 Q. What education do you have relating to  
3 consumer purchase behavior?

4 A. Specifically from an education  
5 perspective, I took courses with respect to  
6 usability, user center design and using that  
7 information to evaluate individuals' and consumers'  
8 interactions with and desires for products.

9 Q. And that's the same thing as purchase  
10 behavior?

11 A. It is certainly related to the activities  
12 that individuals go through in purchasing a  
13 product. And, additionally, my background and  
14 education in human cognition and human attention  
15 and the way in which folks think about and interact  
16 with the environment, absolutely plays into and is  
17 part of the process that individuals go through  
18 when they are purchasing a product.

19 Q. So you've taken a few college courses on  
20 this topic?

21 A. In answering your question with respect to  
22 my education, my formal education in this area,  
23 I believe I've answered your question.

24 Q. Is that -- is my summary, right, though?  
25 You've taken a few courses throughout your



1 bachelor, master's and Ph.D.? Is that a summary of  
2 your education?

3 A. With respect to my actual education and  
4 teaching in that area and what I've been taught,  
5 yes.

6 Q. Have you conducted any studies or research  
7 on consumer decision-making at the point of  
8 purchase?

9 A. Not specifically, no.

10 Q. How about generally?

11 A. Generally, I've conducted research looking  
12 at consumers' and individuals' thoughts and  
13 interactions and asking questions about what they  
14 would purchase and when, to the extent that those  
15 questions relate to their thought processes that  
16 they would have at a point of purchase. I would  
17 characterize that as related to human behavior at  
18 the point of purchase.

19 Q. Is this listed in your report anywhere,  
20 this research?

21 A. In my CV, yes.

22 Q. Which one? Which particular research or  
23 study are you referring to?

24 A. So, again, specifically, it would be the  
25 Hoyos, et al., paper, the first one listed in the

1 with consumer purchase behavior other than what we  
2 discussed?

3 A. Through the course of my undergraduate and  
4 graduate work, I was involved in numerous  
5 usability, user-centered design projects that  
6 involved assessing systems and projects with  
7 respect to the user experience, usability with the  
8 ultimate goal of improving that, such that people  
9 would be more apt to use it and enjoy that  
10 experience of using it more.

11 Q. Okay. I just want to make sure  
12 I understand. So your background in consumer  
13 purchase behavior includes these two articles that  
14 you've published with ongoing research, your  
15 internships 18 to 19 years ago that we just  
16 discussed, and the 9 to 10 months that you spent at  
17 User Centric and some of the college courses that  
18 we discussed and the work that you did in college?  
19 Is that about it? Am I missing anything?

20 A. I believe you didn't characterize the  
21 knowledge and understanding of human cognition and  
22 attention and interaction with information that  
23 absolutely applies to the science of purchase  
24 decision.

25 Q. And you have that background from what?

1 A. Not beyond what we've discussed.

2 Q. Have you offered opinions about consumer  
3 purchase behavior in any other cases?

4 A. No, ma'am.

5 Q. Have you offered opinions on consumer  
6 purchase behavior in any other capacity?  
7 Consulting? Anything else?

8 A. Yes, I have.

9 Q. Can you give me the details of that?

10 A. With respect to all of the various  
11 projects that we have just been discussing for the  
12 past 10 or so minutes, in those projects that  
13 looked at the design and implementation of various  
14 products, certainly, topics related to what would  
15 or would not make folks more or less likely to  
16 engage in the use and, if necessary, the purchase  
17 of those products were discussed.

18 Q. Have you conducted any research on price  
19 negotiations at the point of purchase?

20 A. Not specifically, no.

21 Q. Do you have any training or education in  
22 price negotiations at the point of purchase?

23 A. Price negotiation was certainly a topic  
24 covered through the course of my education with  
25 respect to the individual characteristics and

1           A.     There is a couple phrases, Advanced Driver  
2 Assistance Systems, as well as Highly Automated  
3 Vehicles.

4           Q.     Would that involve studying safety in  
5 general or safety with respect to those advanced  
6 vehicle systems?

7           A.     My recollection is that it was both. I'd  
8 have to go back and check specifically to answer  
9 that question directly.

10          Q.     Would that be noted in those publications?

11          A.     Yes, ma'am, I do believe it would.

12          Q.     Have you ever been qualified in court to  
13 testify as an expert in the field of consumer  
14 purchase behavior?

15          A.     No, I have not.

16          Q.     Do you have any experience about whether  
17 conjoint analysis is a reliable tool for measuring  
18 consumer preferences for various attributes in  
19 motor vehicles?

20          A.     I don't have any specific opinions about  
21 conjoint analysis.

22          Q.     On page 36 you say "Scientific  
23 research" -- I'll give you a minute -- on page 36  
24 you say "Scientific research demonstrates that  
25 consumers tend to be highly heterogenous in terms

1 instructions or warnings, as you call them, in the  
2 owner's manual, User Guide and tip card that we  
3 talked about?

4 A. Beyond -- I performed an assessment of the  
5 named and deposed plaintiffs' use of that  
6 information.

7 Q. Anything beyond that?

8 A. I leveraged the scientific literature  
9 available with respect to the use of such  
10 information.

11 Q. Have you spoken with any of the plaintiffs  
12 in this case?

13 A. No, ma'am, I have not.

14 Q. So you have not performed a study, a  
15 scientific study of the effectiveness generally of  
16 the warnings and instructions, as you call them, in  
17 the owner's manual, user's guide, and tip card  
18 beyond reviewing the plaintiffs' deposition  
19 testimony?

20 A. And applying the scientific literature  
21 with respect to those materials.

22 Q. Is that correct?

23 A. With my caveat, I agree with that  
24 characterization.

25 Q. And there is nothing you think FCA could

1 Are you pulling up the studies on your  
2 computer now when I'm asking questions? Is that  
3 what you're doing?

4 A. Yes, I am.

5 Q. When you have an opportunity or at your  
6 earliest opportunity, can you provide a copy of all  
7 of your publications and studies that you've  
8 referenced in your report to your attorneys?

9 MS. SOFFIN: And when you have an opportunity,  
10 can you provide them to me?

11 MR. FRESARD: I'm handing you a thumb drive.

12 MS. SOFFIN: You are so ready.

13 MR. FRESARD: I'm not sure what's on there or  
14 not.

15 BY MS. SOFFIN:

16 Q. Is this thumb drive you've just handed me  
17 exhaustive of all the publications you authored  
18 yourself and all the studies you relied upon and  
19 cited in your report?

20 A. No.

21 Q. What's missing?

22 A. That thumb drive contains the entirety of  
23 my file in this case. It does not contain all of  
24 the publications that I've authored.

25 Q. Whatever is missing, at your earliest

1 convenience, can you provide it to your attorney  
2 for evaluation and provision to us?

3 A. If requested, yes.

4 Q. I'm requesting it.

5 MR. FRESARD: What are you specifically  
6 requesting?

7 MS. SOFFIN: Any publications that are  
8 missing -- that were missing from here.

9 BY MS. SOFFIN:

10 Q. Some of your own publications are not on  
11 here; correct?

12 A. That is correct.

13 Q. Some are and some are not on here?

14 A. I'm not sure if any of my publications are  
15 on there.

16 Q. Okay. So I'll just say, at your earliest  
17 convenience, can you please gather a copy of all  
18 the publications that you've referenced in your  
19 report and provide them to your attorney.

20 MS. SOFFIN: And then when you have an  
21 opportunity, we'd like a copy of those  
22 publications.

23 MR. FRESARD: I think the thumb drive includes  
24 all of the publications except the ones the witness  
25 authored. Is that correct, Doctor?

1 Q. And were they asked their activities the  
2 day before the testing?

3 A. Not to the best of my knowledge.

4 Q. How about in the hours before?

5 A. Not to the best of my knowledge.

6 Q. We talked before about within-subjects  
7 designs and between-subjects designs. And I recall  
8 you describing within-subjects, but I'm not sure  
9 whether we got to between. Can you describe a  
10 between-subjects design for me?

11 A. Sure.

12 A between-subjects design involves an  
13 experiment, and talking from the social sciences,  
14 where experimental conditions are not crossed  
15 across people. So different groups of participants  
16 will be in different conditions, but they will not  
17 all perform in all of the conditions.

18 Q. Your subject was a between subjects --  
19 your study was a between-subjects design; is that  
20 right?

21 A. With respect to the independent variable  
22 of vehicle type, it was between subjects.

23 Q. Was it within subjects in any capacity?

24 A. I would characterize this was a mixed  
25 design.



1 any of the 12 participants who test drove the BMW  
2 were out partying the night before or any of the  
3 12 participants that drove the Chrysler 300 were  
4 not; correct?

5 A. That would be correct.

6 Q. You don't know whether any of the  
7 12 participants who test drove the BMW might have  
8 worked a 12-hour shift the day before or whether  
9 any of the 12 participants that drove the  
10 Chrysler 300 did; is that correct?

11 A. That is correct. I do not.

12 Q. So how, without this type of information,  
13 can you account for the individual differences  
14 between the subjects?

15 A. The entire purpose of including a group of  
16 subjects is necessarily to account for those  
17 individual differences. Any time that an  
18 experiment is run and data are collected, as a  
19 social scientist, a human factors practitioner, you  
20 expect there would be variability among  
21 participants. There is one thing that you can  
22 count on, is that individuals perform differently,  
23 react differently to information and are inherently  
24 heterogenous.

25 So by collecting data from multiple people

1 for those variables. With respect to all of the  
2 other variables, the countless other variables, in  
3 order to understand the influence of those  
4 variables on your data, one way to do that is to  
5 collect data from multiple people and look at the  
6 variability within the data set.

7 Q. What data did you collect here to look at  
8 the variability?

9 A. Specifically, we recorded video. There  
10 are four videos, video cameras in each vehicle to  
11 record the information out the windshield, the  
12 information on the dashboard, the driver's head and  
13 eye position, as well as video data of the  
14 gearshift. The gearshifts were further  
15 instrumented to record their displacement, as well  
16 as the timing and force that was associated with  
17 their movement. Additionally, survey data were  
18 collected.

19 Q. What survey data?

20 A. For a subset of the participants --

21 Q. What page are you on?

22 A. 78.

23 "A subset of the participants,  
24 specifically those who drove the 2013 Chrysler 300  
25 and 2015 Jeep Cherokee, were asked additional

1 Q. And do you know whether it was  
2 recalibrated before each driver's test?

3 A. I do not believe that was done, nor do  
4 I believe that it's necessary.

5 Q. Going to page 68 under "Turning Task,"  
6 within that first paragraph in that section, it  
7 says "Participants were not limited to a  
8 three-point-turn and can go forward and in reverse  
9 if they desired."

10 Did some participants perform more  
11 maneuvers than others?

12 A. There was certainly variability in the way  
13 that maneuver was performed by participants in  
14 terms of the number of specific forward and back  
15 movements they made.

16 Q. Is that documented anywhere?

17 A. That is certainly captured in both the  
18 video data as well as the raw data.

19 Q. When you say raw "data," what are you  
20 referring to?

21 A. The data that you had referred to just  
22 briefly.

23 Q. Was there someone taking notes as well in  
24 the vehicle?

25 A. Again, with respect to notes taken in the

1 vehicle, those were with respect to the camera  
2 stopped working or the battery died or other issues  
3 with respect to that. As far as the data that were  
4 collected for these in the analysis, the entirety  
5 of those data were done through a combination of  
6 the videos, the vehicle instrumentation as well as  
7 the surveys.

8 MS. SOFFIN: We'll make a request for all of  
9 those videos, the raw data related to the vehicle  
10 instrumentation, the survey results that you just  
11 discussed.

12 Fred, I'm sorry. I didn't clarify that. I was  
13 directing that question to you, please. I can put  
14 all of this in writing after. I think there is a  
15 lot. I'll clean it up. I just want to put it on  
16 the record, make sure there is access to it and so  
17 it can get to you and, ultimately, get to us.

18 BY MS. SOFFIN:

19 Q. Also, any notes taken, do you have access  
20 to that? Notes taken in the vehicle?

21 A. To the extent they still exist, we would  
22 still have them.

23 Q. Were any discarded? Notes?

24 A. No.

25 Q. Page 70. Table 3 says "Parentheses are

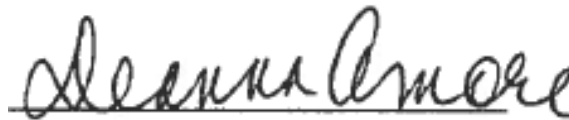
C E R T I F I C A T E

I, DEANNA AMORE, a Shorthand Reporter and notary public, within and for the State of Illinois, County of DuPage, do hereby certify:

That DAVID CADES, PH.D., the witness whose examination is hereinbefore set forth, was first duly sworn by me and that this transcript of said testimony is a true record of the testimony given by said witness.

I further certify that I am not related to any of the parties to this action by blood or marriage, and that I am in no way interested in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my hand this 28th day of January 2019.



Deanna M. Amore, CRR, RPR, CSR